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L1             1 4581715/PN

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4,581,715                    Apr. 8, 1986              L1: 1 of 1
                             Fourier transform processor

INVENTOR:       Gilbert P. Hyatt, P.O. Box 4584, Anaheim, CA 92803
APPL-NO:        6/425,731
DATE FILED:     Sep. 28, 1982
REL-US-DATA:    Continuation-in-part of Ser. No. 160,872, Jun. 19, 1980, Pat.
                  No. 4,491,930, Jan. 1, 1985, and a continuation-in-part of
                  Ser. No. 860,257, Dec. 14, 1977, Pat. No. 4,371,923, Feb. 1,
                  1983, said Ser. No. 160,872 is a continuation-in-part of Ser.
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                  Ser. No. 860,278, Dec. 13, 1977, Pat. No. 4,471,385, Sep. 11,
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                  Dec. 28, 1970.
INT-CL:         [4] G06F 15*31
US-CL-ISSUED:   364*726
US-CL-CURRENT:  364*726
SEARCH-FLD:     364*724, 725, 726, 728
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Fourier transform processor

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ABSTRACT:
An improved Fourier transform processor is provided for generating frequency domain output signals in response to time domain input signals. Various configurations are provided. Processing on the fly as samples are received yields improvements such as greater speed and reduced circuitry. Generating higher resolution output samples in response to lower resolution input samples yields improvements such greater precision and reduced circuitry. Directly combining complex signal components yields improvements such as greater SNR and reduced circuitry. Single bit processing yields improvements such as greater speed and reduced circuitry.

44 Claims, 50 Drawing Figures

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